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A problem of embeddedness? A micro-theoretical model of trade union action and interaction in Europe

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Purpose – The purpose of this paper is to propose a general micro-theoretical framework that helps to understand the embeddedness of trade unions within the European system of industrial relations, and the consequences of this embeddedness for industrial relations outcomes. First, starting from the paradoxical observation of a trend towards homogeneity within a complex, multi-layered European industrial relations system consisting of heterogeneous and autonomous agents, the paper aims to explicate the mechanisms which produce these similarities. Second, the paper seeks to analyse

potential mechanisms for trans-national trade union cooperation and third, it concludes by outlining its applicability as the basis for methodological approaches which enable realistic and policy relevant analyses

Design/methodology/approach - This paper is conceptual and focuses on the development of a general micro-theoretical framework which captures European industrial relations actors' behaviour and outcomes. It integrates theoretical and empirical accounts from differing social science disciplines and from various methodological starting points on trade union action and interaction into one general micro-theoretical framework.

Findings - Starting from a typology of trade union goals, we show how various social mechanisms lead to interdependencies between trade unions and review empirical evidence for their consequences. We then identify a set of motives for transnational cooperation that would allow outcomes that are in line with trade union objectives.

Originality/value – Against the background that previous studies on trade union action and cross-national interaction have paid less attention to the puzzling stylized fact that industrial relations outcomes are mimicked by heterogeneous and autonomous agents actors in different countries, we address this research gap by developing a novel general micro-theoretical framework for the analysis of trans-national trade union action and interaction in order to better understand the underlying causal mechanisms for the common behaviour and outcomes of autonomous actors.

Keywords Cooperation, Microfoundations, Complexity, Trade unions, Europe

Paper type Research paper

Introduction

It is well documented in the industrial relations literature that actors, i.e. social partners, and processes are very different in different European countries (e.g. Erne 2008; Ferner and Hyman 1998; Marginson and Sisson 2004). In all European countries there are distinct types of industrial relations systems embedded in different institutional national frameworks (e.g. European Commission 2015). Even though in recent decades the transnational context has become increasingly important, the national arena for social partners' action and interaction remains the most relevant (Keune and Marginson 2013).

From a transnational perspective, the European industrial relations system emerged and transformed within distinct country traditions (e.g. Crouch 1993) and is currently constituted by the presence of many *heterogeneous* and *autonomous* actors in each country which differ in terms of their domain and which act on different levels. Actors are heterogeneous as they differ from country to country in terms of their institutional and organisational structure (e.g. the level at which they are organized), their role and scopes of activities (e.g. the legal rights and obligations they have) and in terms of their interests. As regards different interests of different actors, there are various differences not only between distinct actors in different countries and sectors but regarding various dimensions of interaction. For example actors in smaller countries have other interests than actors in larger countries. Actors have different interests vis-à-vis other actors in the same country and in other countries (Furåker and Bengtsson 2013; Traxler and Brandl 2009). Again, from a transnational perspective, actors are autonomous as their actions and decisions are usually not bound by any form of constraint or by any binding transnational top-down or bottom-up cooperation initiative. The outcome of the manifold and different forms and attempts of transnational cooperation was just that the

complexity of horizontal and vertical interaction increased as new levels, transnational actors and institutions were introduced (Keune and Marginson 2013: 474).

Against the background of this complex and multi-layered European system of industrial relations with its myriad of heterogeneous and in particular autonomously acting agents, it is somewhat paradoxical that the developments in industrial relations follow very similar patterns, or trajectories. As regards industrial relations *outcomes*, on which we concentrate in this article, in all countries, the wage share has fallen for more than three decades (e.g. Stockhammer 2013). As regards collective wage agreements, the pattern and development is similar and there is a common trend of declining collectively agreed real wages (e.g. Aumayr-Pintar *et al.* 2014). The same pattern applies to strike activity: there is a common trend in almost all countries that strike activity has declined (Brandl and Traxler 2010; Kelly 2015). But also regarding the transformation of industrial relations actors, institutions and processes, common trends, or common trajectories, can be observed. For example, Baccaro and Howell (2011) identified a strong common trend towards institutional deregulation, i.e. decentralization of collective bargaining.

Paradoxically, these common, i.e. European-wide, developments are not “planned”, “governed”, “guided” or “controlled” from above (top-down) as one might expect in the case of common development. Even though some actors in some European countries in some periods have recently had to face constraints with respect to their scope of action, e.g. in the context of the Troika and the new economic governance system of the European Union (e.g. Bieler and Erne 2015; Brandl and Bechter 2017), there is certainly no strong “leader” or any other form of “hegemonic authority” which pushes or pulls in a particular direction. Nor is there any (empirical) evidence for an “invisible hand” which “guides” common development in all countries. Quite the opposite, this behaviour appears to *emerge* from the bottom up.

Against the background that, first, industrial relations institutions, processes and actors in Europe are still very heterogeneous, second, are acting predominantly in an autonomous way and third, their actions are not planned or guided from above, the question arises: What is the reason for this common development? In other words, where is this common behaviour or this *order* coming from? What are the causal mechanisms behind the similar behaviour of different actors?

Given that the actions of many heterogeneous, autonomous and uncoordinated actors lead to the same outcome, at first glance, it seems reasonable to suspect that the answer to the previous questions lies in common macro-factors, such as increasing globalisation, which influence individual actions and explain common patterns in the development of outcomes (e.g. Marginson 2015; Marginson and Sisson 2004; Ramskogler 2013; Traxler and Brandl 2009). The causal mechanisms behind the relevance of such macro-factors were intensively discussed in the context of institutional change, i.e. change in processes and actors (e.g. Morgan and Hauptmeier 2014), but less regarding outcomes. Furthermore, whilst there is no doubt that many of these factors are relevant, the way in which these factors matter, i.e. the causal mechanisms, requires further explanation (e.g. Baccaro and Howell 2011: 552), because these factors might also be used to explain a completely different set of developments.

Whether such factors can be considered to be sufficient to explain phenomena in industrial relations or not draws directly on very old controversies over the superiority of macro- and micro-theories, methodological individualism and methodological collectivism and the need for a micro foundation for macro-phenomena (e.g. Pulignano and Doerflinger 2017). These controversies are of course extensively discussed in social science literature (e.g. Collins 1981) and in the context of industrial relations (e.g. Thelen 1999: 377-8). The main contribution of our paper is to provide a *general* theoretical, i.e.

conceptual, framework. The theoretical framework is based on a structural-individualist perspective, which is individualist in the sense of focusing on actors and their behaviour, but also structural in the sense of viewing actors as fundamentally embedded in social contexts.

An important feature of this perspective is that it recognizes the importance of social structure in shaping individual actors' interests and choices, and it does not treat the impact of this as deterministic but allows for agency of the actors. As regards relevant actors, for reasons of space, the framework presented in the paper focuses on the discussion on trade unions, i.e. on one (or even the) key type of actor, even though the framework can be augmented to other actors. Nevertheless, we argue that this framework, without considering other actors such as employers or the state in great detail, is able to detail sufficient causal mechanisms for observed transnational patterns of influence and commonalities by showing how trade unions in Europe act and interact with each other transnationally. This is important, because it shows how trade unions, even without the interference of other actors, face problems as well as opportunities merely by considering their structural embeddedness vis-à-vis each other. To this end, we show how known mechanisms of trade union interaction can be applied to the transnational context.

This gives us reason to revisit previous theoretical explanations of macro-phenomena in the field of European industrial relations in the next section. We then explain that the key to the understanding of aggregate European level outcomes can be found in trade union actions, for which we derive and systemize their goals and interests in this paper. We then outline how individual trade union action depends upon interaction with others and what the motives for coordination are and then explain the necessity to embed trade union actions in a network of interrelated action. On the basis of this we categorize different forms of interaction and cooperation. Finally we conclude by

presenting a novel approach in the field of industrial relations, i.e. an agent based model approach. We explain that this approach not only has the advantage of providing an understanding and grounded explanation of phenomena in European industrial relations, but also why and how this methodological approach can be useful for any attempts at European industrial relations governance.

Explaining common behaviour of autonomous actors: from factors to actors

There is no disagreement in literature about the diversity and heterogeneity of autonomous industrial relations actors in Europe (e.g. European Commission 2015; Marginson and Sisson 2004), as well as the fact that the development of industrial relations outcomes has been very similar in all countries. This increased similarity in the development of industrial relations includes both qualitative and quantitative outcomes such as the cross-national trend towards an increased precariousness of working conditions (e.g. Doellgast 2012), an increase in non-standard working arrangements (e.g. Pulignano 2017), a transformation in the forms of industrial conflicts (e.g. Kelly 2015; Vandaele 2014) and last, but not least, as another example in the development of collectively agreed wages (e.g. Aumayr-Pintar *et al.* 2014). As regards the latter, Figure 1 not only shows that for European countries for which data is available, there is a declining trend in collectively agreed wages and some convergence between countries, but also that the pattern of development over time shows significant similarities. This similar development in collectively agreed wages is clearly expressed by the upwards and downwards peaks since the economic crisis hit Europe in 2008.

- Insert Figure 1 about here -

The fact that basically heterogeneous and autonomous actors are doing very similar things which lead to very similar outcomes is somehow surprising. Indeed, the rationale behind these commonalities of heterogeneous, and autonomous actors is weakly explored and still puzzling, as the individual actions are not governed by “something from above”. Thus it appears to be advantageous to take a closer look at the motives of individual actors.

Industrial relations systems have their roots in the industrial revolution and evolved over time (e.g. Crouch 1993). Nowadays these systems are multi-dimensional and consist of complex sets of differing actors influencing numerous aspects of economic, political and social life. For reasons of simplicity and analytical clarity, this article focuses on the development of a general micro-theoretical framework which captures only the actions and interactions of *one* type of *corporate actor* (Coleman 1982), i.e. trade unions. In addition, we will concentrate on exemplifying outcomes of trade union actions on outcomes of wage setting which translates to macro-aggregates, such as the wage share, though the mechanisms are likely to be applicable for a wider range of outcomes such as for example the increasing precariousness of working conditions and the growth of non-standard working arrangements. The focus on trade unions as corporate actors is legitimate as trade unions are capable of making their own choices and representing their own goals (e.g. Scharpf 1997). Studying other actors, in particular employers and employers’ organisations, would also certainly be beneficial, but does not limit the general conceptual approach of action and interaction developed in this work as unions are not only the key actors in relevant disciplines of social sciences including, most notably in comparative industrial relations (e.g. Kelly 1998), but also it is trade unions actions (or non-actions in specific contexts and situations) which are central in explaining

how and why aggregate industrial relations outcomes in Europe developed as they did in the recent past. More specifically, it is in the main interest of trade unions and not of employers and employers' organisations to strategically act and interact transnationally since the development of industrial relations outcomes in the recent past so favours the employers' side (e.g. Traxler and Brandl 2009:181). Thus in order to "reverse" any trends or change the situation it depends largely on trade unions actions. Against this background and to simplify the micro-theoretical framework, we focus on trade unions only.

In this article, the micro-theoretical framework of analysis of European commonalities in industrial relations outcomes as well as of transnational trade union cooperation in wage setting rests on the frameworks of causal mechanisms developed by Elster (1989a), Hedström and Swedberg (1996), Hedström and Ylikoski (2010), and Merton (1967). These frameworks enable us to explicate social mechanism that generate such similarities and thus are able to explain macro-phenomena. What is to be explained then is not how isolated wage bargains lead to certain individual outcomes, but rather, how these bargains lead to more or less homogeneity within the transnational system. This means that the level of transnational homogeneity is taken as a macro level characteristic. In order to better understand how homogeneity arises, theoretical considerations about lower level (e.g. Stinchcombe 1991) individual industrial relations actors (i.e. trade unions) and their orientations towards other actors are discussed.

Giving primacy to explanations of social phenomena as a result of the actions of individual agents within social systems is typically known as methodological individualism. It is, however, important to recognize that there exist different versions of methodological individualist approaches (e.g. Udehn 2002), varying from those that explain social phenomena purely as the outcomes of individual (inter)action, to those that prominently invoke institutional and social-structural contexts of individual action. The

perspective taken in this article is that understanding macro-level phenomena improves if underlying generating mechanisms resulting from individual purposive action are explicated, but individual action itself is shaped by institutional context (e.g. Agassi 1975; Pulignano and Doerflinger 2017) and social structure (see also Coleman 1986, 1990; Hedström and Swedberg 1996). This viewpoint has also been referred to as structural individualism (e.g. Raub 1982), as it stresses the importance of the individual actor's position and relation to other actors in the social system in determining preferences and beliefs. The basis of social theory here thus does not consist of "...mutually independent actions performed by atomistic individuals. Rather, individuals' actions typically are oriented toward others, and their relations to others therefore are central when it comes to why they do what they do" (Hedström and Ylikoski 2010: 59). Individual action is thus seen as *embedded* within systems of social relations (Granovetter 1985).

Indeed, the notion that the actions of individual, autonomous actors in social systems are influenced by the actions of others has long been at the core of sociological thinking (Weber [1921-1922]1978: 22-24). Actions may be oriented towards others or the observation of the behaviour of others may reveal factual information that affects the individual's actions (Ibid 1978). Thus any micro-theoretical approach needs to explain not only what actors, i.e. in this article, unions, want and what their preferences are but also how these preferences interact and depend upon others. We start by setting out core trade union goals based on previous developed theoretical considerations. These goals are by no means exhaustive; rather we identify those that can be considered most dominant and sufficient to furnish the mechanisms needed to explain transnational trade union interaction.

Trade union goals: What do unions want?

An actor-based approach to trade unions calls for a theory of trade union goals, i.e. their preferences. As will become clear, different goals may or may not align, and aiming to fulfil these goals may have intended as well as unintended consequences when taking into account the embeddedness of trade union action. In this section, a general actor model is discussed with the help of a typology of trade union goals, based on three elements: (i) maximization in wage bargaining; (ii) reference dependence on fairness preferences; and (iii) ideology.

The type of trade union goal views trade unions as self-interested decision makers seeking to ensure organizational survival, i.e. membership, by maximizing wages and employment through wage bargaining. This conception of trade union objectives is prevalent in rational choice theories and finds its origin in Dunlop's (1944) "Wage Determination under Trade Unions", e.g. see Kaufman (2002). At its core, it defines unions as organisations which aim to maximize the utility of their membership in balancing wage rates and the level of employment (e.g. Freeman and Medoff 1984).

The second type of trade union goal broadly stated is the achievement of fair outcomes. Thus, whilst it would be hard to deny that trade unions aim to achieve high wages, and that they must balance wage increases against job losses, this portrayal of union objectives is incomplete. The reason for this is that in this approach, the preferences of trade unions and/or the workers they represent are assumed to be independent from social context. This assumption of independent preferences has been criticized throughout the development of wage determination literature (early examples include Hicks 1932: 138; Ross 1948). Rather, it is commonly argued that trade unions seek to negotiate wages that workers consider to be fair (e.g. Hyman and Brough 1975; Rees 1993). What is fair in the context of trade union wage determination is however judged by making comparisons, i.e. fairness is a relational concept (Turnbull 2003: 499; Western and

Rosenfeld 2011). In this way, wages negotiated elsewhere become potential reference points (Tversky and Kahneman 1981) against which the first wage is judged. The resulting reference dependence of preferences is therefore a second important element of trade union goals. Trade unions aim to achieve wages that are fair, and fairness is judged by comparing to wages achieved elsewhere.

The third type of trade union goal refers to their ideology, i.e. a system of normative political beliefs. Trade unions are not only market actors (e.g. Kelly 1998; Turnbull 1988) but also political organizations. The political face of unions has received attention regarding internal goal formation and principal-agent problems between union leaders and members (e.g. Ross 1948;) and in particular as being pillars of a moral economy in modern labour markets in which unions are the stronghold of equity and social justice (Western and Rosenfeld 2011: 517-8). An upshot of the political nature of trade unions is that their objectives are deeply affected by ideological considerations. Specifically, the core element of trade union ideology that is relevant for our purposes is solidarity, i.e. striving for communality in defending workers' interests even when this entails compromising one's own payoffs. This appreciation of trade unions as political organizations is important because it "...raises the possibility of (conditional) altruism and solidarity as opposed to universal egoism and free-riding" (Turnbull 2003: 498).

Trade union action can thus be summarized as purposive towards maximizing a trade-off between wages and employment, simultaneously taking into account relativities between wages elsewhere and the wages realized in the current wage negotiation, while also balancing these goals with ideological motivations. However, though it can be easily assumed that all trade unions share the same general goals, this does not necessarily imply that all trade unions are doing the same, i.e. that the outcome of their actions is the same. Unions can have very different perceptions in how to balance wage increases against job

losses. They can also differ in terms of their perceptions of fairness as well as differ in their ideological considerations. The weights of all these elements of action depend very much on external factors which define and constrain their individual actions.

Social mechanisms: from intentional coordination to unintentional influence

On the basis of the trade union goals we identify a number of different causal mechanisms that can account for the international interdependence of trade union action. In order to systematize such mechanisms, we differentiate between three forms of interdependency: (i) explicit coordination initiatives, (ii) implicit coordination via norms, to (iii) unintentional influence via spillovers. All three forms explicitly recognize trade union as fundamentally embedded in a network of trade unions.

The first form of trade union interdependency covers various explicit cooperation initiatives. In the European employee relations context, a number of forms of cooperation activities exist. Some of these are based on top-down initiatives originating from the European Union or from European trade union organisations, in particular the European Trade Union Confederation (ETUC). The rationale behind top-down initiatives, which put some pressure on common unions' action, is that autonomous unions which are embedded in different country specific environments might not overcome the problems of cooperation described by Olson (1965). Most notably is the top-down initiative by the European Union via the European Social Dialogue and the European Sectoral Social Dialogue (e.g. Keune and Marginson, 2013; Marginson, 2016). Other top-down coordination activities were initiated by the ETUC and its European Industry Federations and some even emerged, with some support from top-down, from the bottom-up. Most notably, bottom up cooperation between national unions in neighbouring countries (e.g. Gollbach and Schulten 2000; Larsson 2014; Marginson and Sisson 2004) emerged.

A second form of transnational trade union interdependency is implicit and works via norms. In this form of interdependence, one union acts first and other unions intentionally act in a similar way. This form of cooperation is usually known as pattern bargaining. Even though the pattern bargaining can vary across countries in its function and form, the common denominator is that this form of interdependence functions by the attempt to achieve the same or related outcome in separate negotiations (Sisson and Marginson 2002). In this sense, pattern bargaining can be considered as a bottom-up form of cooperation as unions decide autonomously if they want to follow others. So far there are empirical studies which show that outcomes, i.e. wage agreements, are intentionally used as an important reference point for the individual actions of trade unions in neighbouring countries (e.g. Larsson 2014; Ramskogler 2013; Traxler and Brandl 2009). This causal mechanism of interdependence is intentional rather than non-intentional as unions decide autonomously to follow others or not.

However, not all interdependencies and commonalities in outcomes are the result of intentional efforts to cooperate. A third form of interdependence exists via *unintentional* spill-overs. Spill-overs occur when one outcome of one union action unintentionally affects outcomes elsewhere. Basically two mechanisms for spill-overs can be differentiated. One is based on the maximization of goals exclusively and has been referred to as learning; the other is founded on the reference-dependence of preferences and is labelled as social comparisons (Lehr *et al.* 2014).

The social comparisons mechanism was developed by Festinger (1954) and rests on the assumption that individuals judge themselves relative to others who are perceived as similar. With respect to our context this suggests that unions judge their wage agreements against the wage agreements of others, making fairness a fundamental criterion for action (e.g. Adams 1963). Each outcome, i.e. wage agreement achieved by

other unions (e.g. in other companies, sectors or countries) may potentially be a point of reference. Now the important question becomes: which reference points are relevant. So far there is empirical support that there are two criteria for selecting reference points. First, the outcomes of others in the same sector carries more weight than outcomes in other sectors (Lehr *et al.* 2014). This suggests that perceived similarity is tied to the sector. Second, comparisons are subject to self-serving biases (Babcock *et al.* 1996; Rees 1993) as outcomes perceived as favourable have more influence than less favourable ones.

The learning mechanism has been advocated as a further explanation for unintentional cooperation via spill-overs (e.g. Kuhn and Gu 1999). According to this mechanism, trade unions will learn by observing the outcomes and actions of others if others are more successful in achieving their goals in a similar situation. Such situations can be expected for example when unions in the same sector, but in other countries, experience similar product market conditions. While the learning mechanism predicts that favourable outcomes will be imitated, it also predicts that unfavourable outcomes will cause unions to make lower demands. Evidence suggests that spill-overs occur both due to social comparisons and learning depending on information conditions and that neither mechanism may be prevailing within a national economy (Lehr *et al.* 2014). On the basis of empirical evidence so far, both mechanisms agree that unintentional influence via spill-overs mainly occurs within sectors. In the past, spill-overs were considered exclusively as occurring within nationally confined sectors (e.g. Vroman 1982). However, within the changing network of European industrial relations in which the context within sectors across borders has become increasingly similar (e.g. Bechter *et al.* 2012), the possibility of transnational spill-overs must be considered increasingly relevant as one form of interdependence.

The bottom line of all three theoretical forms of interdependence is that commonalities in industrial relations outcomes can be expected. Whether such commonalities signify, as often held, a common race to the bottom, or not however is not a priori clear. For example, one could expect that via explicit cooperation initiatives, the goals of trade unions can be achieved and thus high or increasing wages, but also according to our union's goals, equity and fairness. This is not necessarily the result of cooperation via implicit cooperation via norms if the wage leader is, for example, following a wage moderation strategy (e.g. German unions). It is also not necessarily the result of unintentional cooperation via spill-overs mechanisms of action if low wage increases are the reference.

The outcome of union embeddedness in the European context

In Europe, one of the most striking features of the development of important outcomes of trade union action is the common downward-spiral in wages and working conditions (e.g. Meardi *et al.* 2013). With reference to the trade unions goals described earlier, this suggests that trade unions have been less and less able to maximise their primary goals, i.e. to raise the wages of employees and/or secure jobs as well as to pursue fairness goals. Why is this so?

As regards the context for union actions and interactions, there is some evidence which suggests that decreasing wage shares coincides with increasing openness of economies (e.g. Stockhammer 2013) and it may therefore be assumed that these factors play an important part in limiting trade unions capacity. The increased openness of national economies has led to increased possibilities for transnational mobility of both labour and in particular capital. Employers are increasingly able to shift production to

low wage regions (e.g. Streeck 1992) while labour can be drafted from other countries with greater ease and often under non-unionized arrangements. The upshot is that the power of national unions to raise wages decreases (e.g. Rodrik 1997). However, as regards the openness of the European common market, the situation is rather a closed market rather than an open market. In fact, the *European Union* can be considered a *closed market*. Even though the openness increases both the shares of imports and exports of all goods and services are lower than in the majority of member countries many decades ago (e.g. Eurostat 2014) in which trade unions were considered to have a high bargaining power. Therefore, a European- wide cooperation of unions is essential and would enable unions to escape from the downward-spiral of outcomes.

However, the developments can be recast as stemming from the increased significance of another type of trade union interdependency. Trade unions increasingly have to take into account what their transnational counterparts do. The consequence for cooperation of trade unions is that coordination became increasingly difficult because the number of actors has increased, i.e. the network of trade union interaction became much bigger and more complex. Unlike under multi-unionism within countries, there is very limited or even no competition over membership between these trade unions in different countries. However, their strategic decisions must account for the potential loss of employment covered by their negotiated collective agreements with other countries. This would imply a stalemate among unions operating in the same sectors in different countries, as no union can unilaterally raise its wage demands without risking job losses for their members. Thus, even discounting any attempts by other actors, such as for instance business or government, to thwart unions, unions' embeddedness poses a problem for their ability to pursue their own interests.

Elements of union cooperation: the cement of unions' order

The problem is that no union can achieve its goals unless cooperation from their (transnational) counterparts can be ensured. By looking at the development of outcomes in Europe, one might posit that there is therefore a problem of cooperation.

Given the background that European industrial relations outcomes developed in a detrimental way to trade union goals and that unions could more effectively push their goals by transnational cooperation the question arises, why are unions not cooperating and interacting strategically (more)? So far as literature is concerned there have been two main approaches: Firstly the question was addressed at a general level from a rational choice collective action perspective on the basis of the seminal work of Olson (1965) which concentrates on the relevance of common interests as well as the need for coercion and incentives to act collectively. Alternatively, case study research, which usually complements Olson (1965), has been used which investigates different and specific forms of common and coordinated transnational cooperation of different unions. The majority of these case studies focus on the problems and obstacles which explain the difficulties for transnational cooperation. Some of these studies analyse coordination initiatives of trade unions (e.g. Erne 2008; Furåker and Bengtsson 2013; Larsson 2012, 2014; Marginson and Sisson 2004; Meardi, 2012), others explicitly in the European Union supported initiatives of collective bargaining (e.g. Keller and Weber 2011) and others even on work-place initiatives (e.g. Meardi *et al.* 2013; Müller *et al.* 2011; Pulignano 2017).

However, the fundamental question is: how can unions achieve sufficient cooperation? Referring to Leist (2011: 21), who derives the concept mainly from Parsons (1937) and Elster (1989b), the answer can be found in different motives for cooperation:

(i) cooperation under self-interest, (ii) cooperation on communal interests, (iii) altruistic cooperation, and (iv) cooperation through norms.

Self-interested cooperation refers to situations in which cooperation is to the benefit of all actors involved. In the case of non-conflicting interests, such as in a closed economy when all unions decide to increase the wage for all employees on the basis of a wage-formula, cooperation can be achieved through a convention. When there are conflicting interests, cooperation entails risk for individual actors, as other actors can opt not to cooperate, making the co-operators worse off. However, when interactions are repeated, fear of retaliation can lead to the emergence of cooperation. A good example of the emergence of such an order in behaviour, or cooperation, is pattern bargaining (e.g. Traxler and Brandl 2009). In the context of transnational wage coordination, it is certainly true that interactions are repeated with every wage bargaining round. If retaliation is feasible, i.e. repaying non-cooperation with non-cooperation in the next round, cooperation could be sustained. Whether retaliation is a feasible and desirable choice of action in the transnational wage coordination context is debatable. It might entail repaying undercutting with undercutting, i.e. willingly taking a step back in the short run with the hope of establishing cooperation in the long run. This step back, however, entails significant social costs and would be unlikely to find general acceptance.

Cooperation can also arise when multiple actors with conflicting interests engage each other in this type of interaction. In this case, information about actors' behaviour in one interaction can become known to the actors they will interact with in the next. In this way, reputation can help convince others to take the risk of cooperating, while the actor has an incentive to maintain a reputation as a good co-operator. This is known as indirect reciprocity. Building a reputation for cooperation certainly appears to be a feasible and desirable strategy for trade unions and would increase their transnational counterparts'

willingness to risk co-operative strategies. The effectiveness of indirect reciprocity is, however, tied to the number and frequency of interactions with different actors, which remains an open question in the wage bargaining context.

Alternatively, cooperation can be motivated by communal rather than strictly individual interest. When actors identify with the goals of the “we”, effective cooperation can be achieved. As argued above, trade unions are not narrowly self-interested actors, they are also guided by ideological considerations. If these ideological considerations can be oriented towards the goal of transnational cooperation and carry sufficient weight in trade union decisions, effective cooperation may be realized.

A third motivation for cooperation is altruism. This is the case when one union is willing to incur costs for the benefit of others. The (empirical) question however is how important the altruistic behaviour of trade unions is. There are various examples in history of the individual altruistic behaviour of humans so it would be wrong from a theoretical perspective to rule out the possible altruistic behaviour of trade unions and how it could be established per se. In any case, altruistic behaviour can help establish the fourth motivation for cooperation among unions: social norms in the form of sanctions for non-cooperation. Such norms foster cooperation if each actor can expect to be punished for not cooperating and the cost of punishment exceeds the benefits of not cooperating. The problem here is that punishment is costly and a public good, i.e. others cannot be excluded from the cooperation-enhancing benefits of punishment. Thus strictly self-interested actors would prefer to free-ride rather than to contribute to punishment. Therefore, sanctions for non-cooperation can only be enacted if at least some actors in the system are willing to altruistically bear the cost of punishment.

Conclusions: from factors to actors and back again

In this article, we presented a general micro-theoretical framework to answer the questions of why trade unions are behaving in a similar way, are cooperating (or not) and thus why the outcomes of their actions are similar in the context of European industrial relations.

On the basis of this theoretical framework we elaborated why in the past three decades unions have increasingly failed to meet their goals, e.g. increasing the wage share, and why unions in different countries are not cooperating in an intentionally strategic way in order to push their interests sufficiently. We argued that the reason why they are not cooperating is not that there are no motives for cooperation, but rather that the current forms of cooperation are either insufficient and/or transnational cooperation is weighted by unions which are embedded in distinct national contexts and considered to be less important. Referring to the motives of cooperation, there seems to be a lack of a European “we” among trade unions, as well as in their altruistic nature. On the one hand, there seems to be evidence that intentionally planned forms of transnational cooperation are not functioning, as outcomes are still detrimental to union goals. On the other hand, there seems to be evidence that implicit cooperation via norms and perhaps also unintentional cooperation via spill-overs mechanisms of action are potentially functioning quite effectively. As far as empirical evidence for cooperation via norms exists, this form of cooperation explains exactly the trends in outcomes, e.g. declining wage shares.

Assuming that the goals and motives for cooperation by unions are determined by unions themselves, from a policy-making perspective, an interesting question is how a European wage policy/strategy can be realized. Given that unions will still be autonomous actors, a common wage policy can only be achieved by transnational cooperation between unions. Independent of the goal of any transnational, e.g. European, wage strategy, it is

essential to know which of the three identified and presented forms of cooperation, i.e. explicit and intentionally planned cooperation, implicit cooperation via norms, and unintentional cooperation via spill-overs mechanisms, are most efficient as well as politically realistic and governable?

This question is however an empirical one and the framework developed in this article provides a theoretical basis for empirical investigations of actions and interactions of European industrial relations actors. Moreover, the theoretical framework developed here provides a micro-level backbone for academic and policy-oriented analyses which forms the basis for answers to these questions. Specifically, the presented theoretical framework defines not only the goals and motives for action and interaction but also defines the forms of interaction for any actor. Given that the number of industrial relations actors in Europe is very high and because there is a myriad of possible interactions between actors, any comprehensive, fine-grained and policy relevant, i.e. realistic, model of European industrial relations is very complex. In addition, the actors are heterogeneous in the sense that even though all are characterized by the same set of goals and motives, the relevance, i.e. the weighting, of the different items as well as of links between actors in the network are not necessarily the same. However, questions on the relevance and weight of both links and items are not a theoretical matter but are “simply” empirical questions.

Thus, any attempts in modelling a realistic portrait of European industrial relations actors’ motives and interactions must face the challenge that the European industrial relations system is highly complex. However, this underlying complexity is not unique to European industrial relations research alone, the analysis of complex systems being a generic theme and problem in many sciences, including social sciences, for which various methodological approaches have been developed in recent years. One important

methodological approach is the so-called agent based model (ABM) methodology which has become increasingly popular in social sciences (e.g. Gilbert and Troitzsch 1998) with Freeman (1998: 19) being the first to highlight the usefulness of ABM in the field of industrial relations. ABM is a computer simulation based bottom-up methodology which explores the microfoundations of macro phenomena or patterns. The modelling approach concentrates on the actions and interactions of agents, i.e. actors, and rests on four principles (Macy and Willer 2002): first, agents are autonomous, i.e. make their own decisions; second, they are interdependent, i.e. agents consider the actions of other agents as relevant for their own decisions or at least the consequences of decisions of others are relevant; third, agents act according to rules; and fourth, agents are adaptive and backward-looking, i.e. they learn from their past actions. It is striking that these principles match fully with trade union actions in Europe and the theoretical model presented in this article.

ABM reflect Coleman's methodological boat as macro factors, e.g. the internationalisation of the economy, are not irrelevant because they constrain and influence the actions of agents, whose interactions then aggregate as new macro-outcomes. The core of the ABM approach is on the bottom of the boat, i.e. in the causalities of individual action and interaction which are outlined in this article. Once the theoretical and empirical basis is defined the actions and interactions of all agents are computationally simulated and their effects, i.e. the outcomes at macro-level, are calculated, i.e. emerge.

Although the ABM approach is appealing for the analysis of complex systems which consist of a myriad of autonomous and heterogeneous actors, it does, of course, have limitations which mainly rest on its artificial, i.e. computer based, nature. Nevertheless ABM can be very helpful in understanding European industrial relations

since there is no (strong) central coordination of trade union actions and phenomena emerge in the complex and multi-layered European system of interaction. However, once an ABM is created which is able to describe and explain current and past phenomena in European industrial relations it can be very useful for testing different scenarios. In other words, ABM offers a method to analyse different hypothetical configurations of actor's interactions in different and changing configurations. Thus, they can give very precise information about what would be the outcome in the case of institutional change (Casti 1996). Thus it is useful for informed public policy making and institution building. In this article we presented a micro-theoretical framework of industrial relations actors, i.e. trade union, action and interaction which provides the theoretical backbone for further studies which enable informed policy making.

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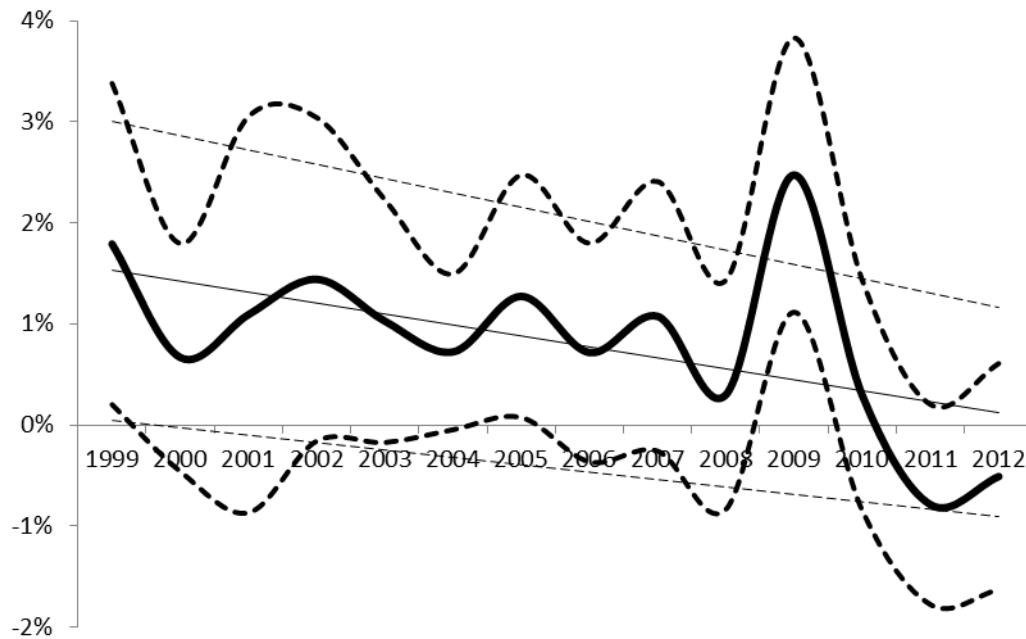
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Figure 1. The development of collectively agreed wages in Europe, 1999-2012



Note: Continuous lines show the (unweighted) average of yearly real increases (in percentages) in collectively agreed wages in 17 European countries from 1999 to 2012. Dashed lines show the standard deviation for each year across countries. Thin lines show the respective trend over the period. Country sample was based on the availability of comparable data and includes Austria, Belgium, Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Malta, Netherlands, Portugal, Slovakia, Spain, Sweden, and the United Kingdom.

Source: Aumayr-Pintar *et al.* (2014).